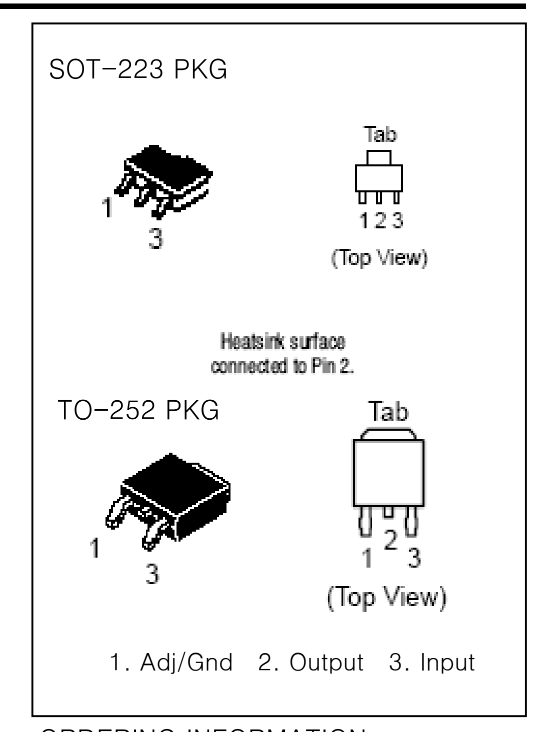
FEATURES

- Low Dropout Voltage 500mV at 1.5A Output Current
- Fast Transient Response
- 0.015% Line Regulation
- 0.1% Load Regulation
- Internal Thermal and Current Limiting
- Adjustable or Fixed Output Voltage(1.5, 2.5, 2.85, 3.0, 3.3, 5.0V)
- Surface Mount Package SOT-223 & TO-263 (D2 Package)
- 100% Thermal Limit Burn-in



ORDERING INFORMATION

Device Name	Package
LM1086S-XX	SOT 223
LM1086RS-XX	TO252(D)

(XX=Vout=1.5V, 2.5V, 2.85V, 3.0V, 3.3V, 5.0V
Adjustable= AD)

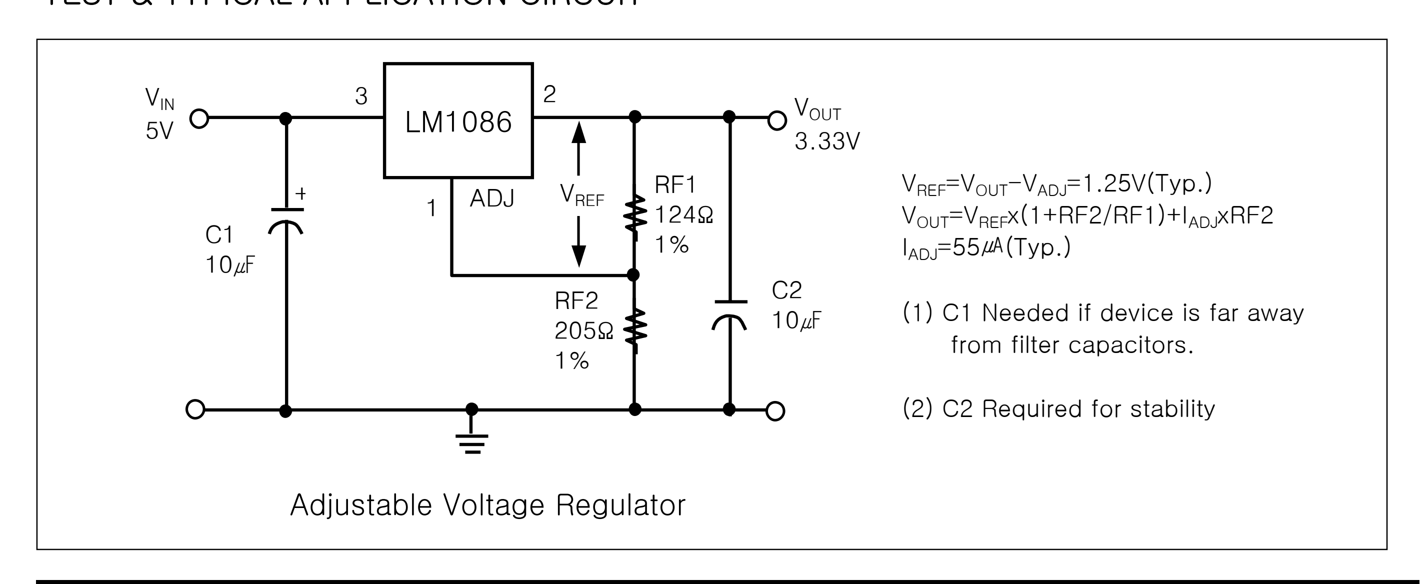
APPLICATIONS

- Battery Charger
- Adjustable Power Supplies
- Constant Current Regulators
- Portable Instrumentation
- High Efficiency Linear Power Supplies
- High Efficiency "Green" Computer Systems
- SMPS Post-Regulator
- Power PC Supplies
- Powering VGA & Sound Card

DESCRIPTION

The LM1086 is a low dropout three terminal regulators with 1.5A output current capability.
The output voltage is adjustable with the use of a resistor divider. Dropout is guaranteed at a maximum of 500 mV at maximum output current.
It's low dropout voltage and fast transient response make it ideal for low voltage microprocessor applications. Internal current and thermal limiting provides protection against any overload condition that would create excessive junction temperature.

TEST & TYPICAL APPLICATION CIRCUIT



Adjustable Voltage Regulator

ABSOULTE MAXIMUM RATINS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Supply Voltage	Vin	7	V
Operating Junction Temperature Range	Topr	0~125	℃
Storage Temperature Range	Tstg	-65~150	℃
Thermal Resistance Junction to Case TO-263	Tjc	3	C/W
Thermal Resistance Junction to Ambient TO-263	Tja	60	C/W
Lead Temperature (Soldering) 10 sec.	Tsol	300	℃
Maximum Output Current	Imax	1.5	A

ELECTRICAL CHARACTERISTICS I_{OUT}=100㎃, T_A=25℃, unless otherwise specified

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
1.5V Version					
Output Voltage	0<I_{OUT}<1.5A, 2.75V<V_{IN}<7V	1.485	1.5	1.515	V
2.5V Version					
Output Voltage	0<I_{OUT}<1.5A, 3.5V<V_{IN}<7V	2.475	2.5	2.525	V
2.85V Version					
Output Voltage	0<I_{OUT}<1.5A, 4.35V<V_{IN}<7V	2.822	2.85	2.879	V
3.0V Version					
Output Voltage	0<I_{OUT}<1.5A, 4.5V<V_{IN}<7V	2.97	3	3.03	V
3.3V Version					
Output Voltage	0<I_{OUT}<1.5A, 4.75V<V_{IN}<7V	3.27	3.3	3.33	V
5.0V Version					
Output Voltage	0≤I_{OUT}≤1.5A, 5.5V≤V_{IN}<7V	4.95	5	5.05	V
All Voltage Options					
Reference Voltage (V_{REF})	V_{IN}≤7V,P≤P_{MAX}	1.225	1.25	1.27	V
	1.5V≤(V_{IN}-V_{OUT})≤5.75V, 10㎃≤I_{OUT}≤1.5A	1.225	1.25	1.27	
Min. Load Current(Note 3)	1.5V≤(V_{IN}-V_{OUT})≤5.75V		5	10	mA
Line Regulation (ΔV_{REF}(V_{IN}))	2.75V≤V_{IN}≤7V, I_{OUT}=10㎃, T_J=25℃		0.005	0.2	%
Load Regulation (ΔV_{REF}(V_{OUT}))	10㎃≤I_{OUT}≤1.5A,(V_{IN}-V_{OUT})=3V,T_J=25℃		0.05	0.3	%
Dropout Voltage	ΔV_{REF}=1% , Iout=1.5A		1.1	1.2	V
Current Limit I_{OUT}(MAX)	Vin-Vout=3V 1.4V≤(V_{IN}-V_{OUT}) Adjustable Only	1.7	2.5		A
Long Term Stability	T_A=125℃, 1000Hrs		0.3	1	%
Thermal Regulation (ΔV_{OUT}(Pwr))	T_A=25℃, 30㎳ pulse		0.01	0.02	%/W
Output Noise, RMS	10Hz to 10Khz T_A=25℃	0.003			%/Vo
Thermal Resistance	Junction to Tab			3	℃/W
	Junction to Ambient			60	